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## A TENNESSEE SQUIRE.

THERE is perhaps no part of the United States where life goes on more calmly than in the region of the Cumberland Mountains, Tennessee. This beautiful wilderness is thinly peopled by a race of 'natives'—that is, white settlers and squatters, who are as unaffected by the fierce activities of their fellow-citizens in the Eastern and Western States as if they were inhabitants of another continent or men of another age. Their homesteads are remote from highways; and these highways are so little frequented, that weeks may pass without a stranger appearing. Having very imperfect means of transport for corn or cattle to paying markets, they grow just sufficient for their own use; and simple wants are easily satisfied in a subtropical climate.

Maize is the staple food, wheaten bread being rarely eaten. Swine-flesh of the toughest and least nutritious sort furnishes much of the animal food. Milk is little used. Intoxicating drinks are rarely partaken of, though a good deal of peach-brandy and corn-whisky are said to be made illicitly. But these are sold to saloon-keepers in by-places, and the money expended in powder, shot, and the few articles required for a primitive household.

Tea and coffee are the favourite stimulants of Tennessee natives, particularly the latter. When whisky is not made, game is sold at the nearest town to obtain what is needed; and often the hunter will go ten miles with a pair of deer-hams, half-a-dozen turkeys, rabbits, or other spoils of the chase; and glad is he to bring back a few pounds of green coffee in exchange.

Hunting is indeed the real business of the Cumberland Mountaineer, farming being a mere incident. To roam in the boundless wilderness with a long rifle, accompanied by a dog, is the occupation and the joy of the half-wild men of the Tennessee forests. Wonderful shots are they, rarely failing to bring the deer down by a bullet through the heart. But though loving solitude

more than society, the hunter is kindly, hospitable, and anything but a misanthrope.

In a sparsely peopled country where there are no hotels, the traveller must either carry a tent and provisions, or seek shelter and food from the dwellers in the land. I took the latter course; and never was refused the best that the house afforded. Many hosts repelled all attempts at payment; some even objected to be thanked. The system of demanding and giving hospitality is so common that it is never considered as a benefaction or a favour. What the squatter gives to-day, he himself may have to ask for to-morrow. Business, the chase, a political errand, sends him a day's journey from home, or leaves him belated. That causes him no disquietude. The wanderer goes to the nearest house, assured of a frank and hearty reception. It matters not that he is a stranger. He is received without embarrassment, with genial politeness. But it is necessary to observe that a change is coming over frontiersmen. A host of tramps are prowling over the United States, worse than their fellow-vagabonds in England, and perhaps more difficult to reclaim. The maraudings and brutalities of these men have made farmers suspicious, and chilled something of their native kindliness. Still, the honest stranger is welcomed in a manner that compares favourably with the hospitality of cities; for in these remote wilds, poor people living hard lives, are more neighbourly than the inhabitants of London, Paris, or New York.

One of my pleasantest remembrances of Tennessee travel is connected with a short stay I made at the house of a certain Squire named Harker, who lived on a lonely road some distance from Jamestown. The weather was very hot, and my horse and self were tired with a five hours' rapid ride through forest and fell. It was nearing noon, the Tennessee dinner-hour, as I came in sight of the Squire's log-cabin, to which I had been directed by those who had marked out my itinerary. The barking of a great wolf-hound brought out the Squire. He appeared about sixty

years of age, tall, spare, and lithe as a young man. His hair was steel-gray, face close shaven, skin browned by weather; his eyes light blue, calm and benignant in expression.

'I come to ask for something to eat for my horse and myself,' I said.

'Yes, sir,' he replied, expectorating deliberately. 'Come in.'

With that he led my horse to a trough fed by a mountain stream; and afterwards put the tired animal into the stable, throwing before him some corn-cobs and a bit of coarse hay. Then we went towards the house.

Sitting by the fire was a woman, of dubious age, fifty-five or sixty-five. Although the weather was so hot, she was crouched over the blazing logs. Her face was yellow-olive in colour, thin to emaciation, haggard and wan. Her eyes had a dreamy quietude in them, like those of a person habituated to soothing drugs. Her figure was gaunt as a skeleton, and scantily draped in a faded cotton gown; the outline of her long angular limbs being rendered more observable by an obvious lameness. In her mouth was a long and much used clay-pipe, the bowl black as ebony. She paused an instant in her puffing as I entered, then proceeded to smoke without the least embarrassment.

In the chimney corner near to the mistress of the household stood a beautiful young girl of fifteen, tall as my host, slim as a poplar, with dark pensive eyes, pale olive complexion, and dark hair loosely gathered into a knot. She smiled a childish welcome, which had the effect of destroying the charm of her innocent beauty, for it displayed teeth repellently black. She did not reply to my inquiries respecting her health; for a sudden disquietude passed over her face; her dark dreamy eyes were suffused; she passed hastily to the door. Quick as light she extracted a quid of tobacco from her pretty mouth, and then returned to her mother's side. I tried to appear oblivious of these little incidents, and advanced to shake hands with a young man coming from an inner room. He was shorter and more squarely built than his parents and sister, but the contour of his face and his eyes left me in no doubt that he was the son of my host. A lump of tobacco was in his lower jaw, giving him the aspect of a man suffering from excessive gum-boil. He greeted me with kindly gentleness, and sat down.

The interior of the house was extremely rude. Evidently, from its dilapidation, the cabin had been built many years. The logs were blackened by the weather; the floor was patched and uneven; and through many a cranny the sunlight gleamed. Four beds were visible, two in the general room where I was, and two in a little room half-screened by a curtain. The beds were clean, covered with patchwork quilts, but humbler than the couches of our superior peasantry. A few thoroughly uncomfortable chairs were scattered about; a round table was in the middle of the floor; a rough culinary bench was under the window near the back-door. The fireplace was a stony chasm, without grate, oven, or other cooking apparatus. A large pot, like that used by gypsies, stood upon the hearth. Such was the furniture of this home in the wilderness.

I cannot say that the house was dirty, untidy,

or in any way wretched. It lacked altogether that snugness and comfort that English people associate with home. There was no sign of poverty, of that pathetic confession of a desperate fight with circumstances, so often seen in the neat homes of the poor in England. And the family had no semblance of being 'hard up.'

Mrs Harker was badly, meanly, scantily dressed, worse, indeed, than any labourer's wife in rural Britain. But she did not seem to be aware of it. Miss Harker wanted a new gown, better shoes, a competent hairbrush, and a general reformation in her ideas of attire, though evidently unconscious that she was at variance with correct standards of taste. The worthy Squire wore a pair of pants that had deserved retirement long ago. His shirt was coarse as sailcloth; and though clean, wanted the skill of an abler laundress than his household afforded. His Wellington boots, into which his pants were thrust, were hoary with the mud of years. Blacking is unknown in the Tennessee wilds, and is as superfluous as hair-powder. Shirt, pants, boots, comprised the whole costume of the Squire and his son; as gown, shoes, stockings, seemed to do for the ladies. Let no fastidious dame or scrupulous dandy find fault with such heretical notions of dress. I was myself at that time wearing simply shirt, trousers, and shoes, and feeling that these were a burden grievous to be borne. The temperature was ninety-eight degrees in the shade; in the sun, one hundred and twenty degrees. Teufelsdröckh might have learned something more of clothes-philosophy had he been Squire Harker's guest.

The doors and windows were wide open, permitting a faint current of air to pass through the room; air laden with the perfume of azaleas, growing like rank weeds in the forest, and with the faint odour of the prairie-rose. A humming of bees and buzzing of flies came rhythmically athwart the pauses in the conversation. Outside, the intense white sunlight glittered on every reflecting surface; and the ineffable violet sky soared to an immense height. Across it, here and there, swam rolls of snowy cloud, like pillows of carded wool. The remote firmament, the slow-gliding clouds, the hushing sun-glare, the droning insects, the quiet talk of my entertainers, the stillness of the forest, seemed all harmonious with the calm of a tropical noon.

Hurry here was impossible, rapidity of thought an absurdity, rapidity of action suicide. Life was a wakeful dream, in which to smoke lazily, to exult serenely at the dawdling pace of Time hobbling along on padded sandals, were the only duties.

My hostess informed me that she had long suffered from ague and rheumatism. She had taken all sorts of doctor's stuff, but with little relief. She rose to fetch the bottle containing her medicine, and then I saw how lame she was. Her left hip appeared to have lost its power of articulation. She moved with pain and difficulty, using a strong stick. I was very sorry for her, and we soon became confidential. In talking over remedies, it was clear that the quack was mighty in the land, and that Mrs Harker had suffered much therefrom. And the schoolmaster was feeble. The commonest news of the time was unknown to the family, or had

filtered in by small drops of hearsay. All literary, scientific, or other culture was absent from this household. I was nonplussed at every step, having to begin *de novo* with almost every topic. But I thoroughly interested my friends, who began to look upon me as an extraordinary person, when I tried to explain the genesis of malaria and rheumatism. Diseases were accepted by the Squire's family as mysteries, which no knowledge could fathom, and which medicine could only mitigate.

'I guess you'll like to eat?' said Mrs Harker after a while.—'Get dinner ready, Susan.' This to the daughter.

During the conversation, which was not interrupted, I observed how the meal was prepared; indeed, I could not help it, as it went on under my eyes. After throwing more wood on the fire, Miss Harker half-filled a tin bowl with Indian meal; into it was dredged some 'raising-powder'; water was added, and a paste made in a few minutes. The pot on the hearth was partly filled with hot ashes, and small lumps of dough placed on them; the lid was put on, and the bread-baking was in process. A kettle was placed on the fire, and while the water was heating, the coffee was ground. Afterwards, thick slices of bacon were cut from a rusty fitch, that looked like a section from a pine-slab. A huge heavy frying-pan was filled with the bacon, placed on the fire; and soon the odours of the pan pervaded the room, effectually overwhelming the fragrance of the azaleas and roses. Meantime, from a hidden storeroom, an up-piled dish of apple-jam was brought, and a strange-looking substance resembling cream-cheese. A few cracked cups, plates, and small dishes, very heavy and thick, furnished the table equipage.

The meal was soon prepared; and I took the place assigned me by my host, who immediately sat down on the one side of me, his son taking the other. I waited for the ladies to take their places; but they showed no disposition to do so. Feeling uncomfortable, I ventured to suggest that Mrs Harker should take my seat, which seemed to surprise my friends. No; the women would dine afterwards. The Squire did the honours of the table in a generous fashion, piling my plate with bacon, filling my dish with jam, and pressing the hot cakes upon me. Miss Harker supplied the coffee. Her mother continued to smoke and talk in the chimney corner.

The experience I had subsequently of Tennessee manners and customs showed that the Squire's family was much like others. In no instance did mothers and young children sit down with the father, elder boys, and myself. The old paternal system, which has almost died out in Western Europe, flourishes in the American wilds. No doubt, when strictly *en famille*, the members of the household eat together; but before guests, mothers and youngsters retire into that seclusion out of which the race has slowly emerged. But there was no brutal ignoring of the feeble members of the family, no attempt to pass them by. Politeness towards the stranger and the devotion of the host to his guest, seemed to be the reason for this arrangement. I must say, however, that hospitality loses much of its charm when women and children become servitors

and spectators instead of fellow-banqueters. And in the settled parts of America there is such an equality in the family, that I found the squatter's custom more singular than if I had been in another country.

I had made acquaintance with American 'pork' prior to meeting it at my host's table. Its harsh fibre, its rancid fat, its want of all that is gracious in looks and in flavour, and particularly its immense demands upon gastric energy, were well known to me. But it was the *pice de résistance*, and must be eaten. The cream-cheese turned out to be butter, such as would have made an English dairymaid stagger, and British butter-eaters grateful for oleomargarine or other product of the chemist's workshop. Out of respect for its author Miss Harker, and at the pressing request of her father, I strove to do it justice, but failed totally after one trial. Few people in our islands are condemned to 'corn-bread'; and I sincerely congratulate them. It is altogether wanting in the charm and the sustenance found in our staff of life. Perhaps were it fermented and baked like our wheaten bread, it might be more agreeable and nourishing. The cakes prepared by the hands of my young hostess left much to be desired, not for me, but for herself and family, who had to eat them three times a day for life. The apple jam was neither sweet, sour, nor savoury—the completest neutrality in preserved fruits I had ever tasted. Sugar is dear in the United States, and many other plants besides 'cane' are utilised for obtaining saccharine matter. One of these is sorghum, much cultivated in the South; and I suppose my hostess had preserved her apples by this means.

Coffee strong, fragrant, and abundant, was the refreshing and invigorating item in the dinner. Its excellence atoned for a multitude of culinary foibles and failures; and though unsupported by sugar, cream, or milk, it was a tower of strength in itself. Coffee plays an important part in frontier-life, and will advance in estimation as whisky recedes. A generation of farmers, squatters, and pioneers is growing up to whom alcohol is objectionable in any form. A solid rock of opinion is rising against strong drink in every part of America, and I found it nowhere more pronounced than in the Tennessee Highlands. Coffee gives all the stimulant the climate requires.

Dinner being over, the Squire and I went out to see how my horse was faring; then we went to see his tobacco-field, about which we had talked during the meal. Outside the house, everything was as untidy and neglected as within. Under a shed lay a rusty plough, traces, chains, harness, and other gear. A broken wagon was slowly disintegrating in one corner, a mud-splashed rickety buggy in another. An ancient loom was in an empty stall. Corn-cobs, maize-litter, and rubbish from cowhouse and stable, were lying in the yard in every stage of decay. A dismantled snake-fence had once separated this yard from the peach-orchard; but storms and rot had made many gaps, through which gaunt hogs prowled at will. Neglected as the trees were, they were thick with fruit, promising a crop that would have made a little fortune in Covent Garden. But the largest proportion of the peaches was destined

for the Squire's hogs. About fifty magnificent apple-trees were in another orchard, literally bearing as much fruit as leaves. Such trees are impossible in England. The Squire was not enthusiastic in his admiration of peaches and apples, listening to my remarks upon the coming harvest with genial indifference.

Beyond the orchards was a field of maize, so roughly cultivated, that the hogs might have made the furrows, except that there was some attempt at straight and continuous lines. A few days' work had suffice for ploughing and sowing; a few days' labour would gather the corn; then the Squire's duties as a husbandman would be fully discharged.

Near the maize-field was the tobacco-patch, covered with vigorous plants, upon which the owner glanced with a complacent eye. Beside them was a long strip of cotton-plants revelling in the sun, but sorely hampered with weeds. Cotton was grown to supply the family wants, the women picking, spinning, weaving, dyeing, and making the garments. About half an acre of potatoes completed my host's cultivated land.

It is not considered impertinent to ask a land-owner in America the extent of his possessions; and in reply to my inquiry, the Squire told me he owned about eight hundred acres. Not one hundredth part of this was tilled; but that did not strike Mr Harker as uneconomical.

What surprised me most was the absence of a kitchen garden. No salads, no cabbages, no beans or peas, none of the herbs cultivated by the peasants of Europe. And not one cultivated flower, save the rosebush by the front-door, and that appeared to be an accident. A ragged, ignored vine scrambled over a corner of the house, the only natural embellishment.

Such was the home of Squire Harker, a justice of the peace, an intelligent man, a sober, industrious American citizen, in whose veins ran the impulsive, domineering Anglo-Saxon blood. Sequestration from society, the infatuations of a hunter's life, want of culture, had made him indifferent to the hopes and ambitions of his age. He had his compensations in such health and vigour as no city dweller can know; he had, too, a peace of mind that passes the understanding of this restless age. He bore his sixty years with greater ease than many an Englishman half the number. He enjoyed the present hour calmly, and looked with absolute undismay at on-coming age, confident in himself and trusting in Providence.

But it was different with his wife and daughter; theirs was the fate of the squaw, mitigated by the tendency of the race. Life for them and others similarly situated, was a narrow and unembellished drudgery, though not of killing hardship. Rude and monotonous diet, which suited hunters, destroyed all the graces and sapped the vitality of the women. Rarely did they quit the precincts of the house; there was no change of scene for them, save the leafing and unleafing of the forest. They had work enough to keep the mind from stagnating, but not varied sufficiently to excite invention, not severe enough to rouse slumbering energies. Fancy had no exercise, and thus speech was ungraced by the common elegancies of language. By the way, it is remarkable how taciturn and slow of utterance the backwoods people are.

Vacancy of mind, deficient exercise of the imagination, and loneliness, tempt many of these women to seek the soothing delights of tobacco. The perfidious anodyne becomes a tyrant necessity, and damages the health, ruins the beauty, and increases the torpor of soul. America is said to be the land of faded matrons. But from my own observation, I believe improper diet, especially the invariable 'hot biscuit,' does more damage to face and figure than the rigours of climate. Bad water, malaria and various febrile diseases do great mischief to form and colour; but rough and ungraceful homes are greater foes to female loveliness. I have seen ladies of middle age, who have lived in superheated rooms amid the excitements of New York's fervid existence, confirmed topers of ice-water and devourers of 'candy,' who were nevertheless quite as well preserved as English ladies of the same age.

The fact is, women need the society of their own sex more than men. Body and mind degenerate for want of sympathy, criticism, and emulation. Six months' residence in Cincinnati would have developed Miss Harker into a brilliant young lady, as incapable of chewing a 'quid' as of cannibalism; and the same environment would have cured her mother of the languors and vapours which oppressed her like an atmosphere of carbonic acid. The progress of civilisation in America, in another half-century, will render the fate of women wholly free from the privations endured by Squire Harker's worthy wife and charming daughter.

### VALENTINE STRANGE.

#### A STORY OF THE PRIMROSE WAY.

CHAPTER XXXIII.—I HAD THE PLEASURE OF MEETING YOU, SIR, ONE HOT DAY LAST SUMMER, WHEN YOU PAID ME THIS IDENTICAL HALF-SOVEREIGN.

GERARD, grasping Hiram tightly by both arms, faced him beneath the gaslight. Hiram, scarcely understanding as yet who had got hold of him, faced Gerard. The two looked at each other curiously.

'I reckon, mister,' said Hiram, 'that you've made some sort of error.'

Gerard seemed to be of that opinion too, if his face were trustworthy. As to who Hiram might be, he had not at that moment the remotest notion.

'Perhaps I have,' he answered, with a touch of dubious sarcasm in his tone. 'We shall see.' He released Hiram, and warned him. 'Stand there. If you attempt to make a move, I'll throw you out of the window.'

'Then,' responded Hiram, 'I will not attempt to make a move. Your diggings air too lofty.' He kept his eyes on Gerard, but stooped for his hat, warily, and having secured it, brushed it with his elbow, and set it on, a little on one side. Gerard, regarding him, stepped sideways to the letter-box and took out the packet. He knew by the look and feel of it what it was; but he was in a mood to do strict justice. He opened the package, therefore, and found the half-crown in it, and the inscription on the paper, as before.

'Now,' he asked, tossing the half-crown on the table, and looking dangerously at Hiram, 'who set you to do this? Don't prevaricate with me, or I'll break every bone in your body. Tell me who sent you here with these insolent messages.'—Hiram returned no answer, but held him with his glittering eye, watchful of every movement.—'Out with it!' cried Gerard.

'Keep your hair on,' returned Hiram, in a tone of soft expostulation. 'You're in no hurry to get bald.'—Gerard made a swift motion towards him. Hiram made a swifter retreat. The two being on either side a round table of considerable size, it was not easy to get at close quarters, unless both were so minded. Hiram in his flight contrived to possess himself of a poker, and held it in an attitude of defence; improvised and amateurish, but unpleasant for an assailant to look at. Gerard, even in his heat of anger, recognised the loss of dignity inevitably accruing to a chase around the circular table, and stood still, devising means of approach. Hiram took advantage of this pause, and prepared to offer persuasive counsel. 'This is not a reception,' he began, 'calculated to feed the enthusiasm of affection.' At that second, Gerard vaulted the table, closed with him, and wrested the poker from his grasp. Hiram, more fortunate than in their first encounter, eluded his hold, but left a portion of his coat behind. 'Look here!' said Hiram from the other side of the table; 'you ridiculous madman. What do you mean by it?'

'Who sent you here?' cried Gerard again.

'Nobody sent me here.'

'What do you mean by dropping these confounded things in my letter-box three nights running? Who are you?'

'Now,' responded Hiram, in soothing tones, 'this is reasonable. If you'll put that poker down and listen to reason, I'll explain. And if you won't, and will insist on strife, I ain't goin' to let you maul me how you like—mind that. I'm loath to hurt you, and bein' a sensible man myself, I am not hungry to be hurt. You don't know me?'

'I don't know you from Adam.'

'I am not Adam. I had the pleasure of meeting you, sir, ten miles from Brierham, one hot day last summer, when you paid me this identical half-sovereign for carrying a note to Valentine Strange, Esquire.'

'Well?'

'Well. You may remember I told you that you had given me the only streak of luck I had ever had since I landed on these shores. You may recall likewise, that I remarked that if ever you were in a real hole, you might do worse than apply to Hiram Search.'

'Well?' This reiterated inquiry began to assume a dogged and threatening tone.

'I am beginning to see,' continued Hiram, 'that thistles are my proper diet. I own up, straight, that if anybody had offered me help on the sly like this, I should have rode rusty with him. But if you think that my half-crowns are so plentiful that I can afford to play jokes with 'em, you are prob'ly a greater ass than I am. Mister, let me lay it out straight for you. You helped me, when you was that squeezed in with money you could hardly move. Then

I happened to read in the papers about Garling—I won't distress you if I can help it—then you happened to come and dine at my employer's restaurant—I was that mudheaded—Well, now, between man an' man, you can't ask more. I'm sorry I offended. You can call me anything you like, if it relieves you. I deserve to be kicked, though I should not, as a friend, advise you, or any man to kick me. I apologise with all my heart; and if you fancy that I am mean enough to have offended you willingly, you do me a greater wrong, sir, than I have offered you.'

There was positively a real dignity in Hiram's tone as he concluded. His manner was conciliatory, frank, independent, yet submissive, as became his apology.

But Gerard was an Englishman, and was not going to be conciliated all on a sudden by any man alive. 'Couldn't you guess, you blundering idiot,' he said roughly, 'that you could do nothing more offensive, nothing more insulting?' He was very favourably impressed with Hiram, or he would not have bestowed a word upon him.

The other felt a sort of amity in the rough words and tones, and half unconsciously advanced to meet it. 'Let me make my excuses as clear as I know how,' he said. 'It's partly the smallness of the sum that aggravates the natural feelings of the British aristocrat.'—Gerard laughed outright, his first laugh for six weeks.—'It is indeed,' said Hiram. 'Seriously now, it is. There never was anything I tried to do with my fingers I couldn't manage, worse or better; but in respect to feelings, I haven't got a sense of touch at all, and that's a fact. But now, look here! I am real grieved, but—Look here! Don't you mind me because I can't grease it and make it run smooth, and scent it and make it smell nice. You helped me, and you told me a lie when you did it. Yes, sir. Says you: "I've got no silver, dern it all;" and I saw the shine of silver in your purse. Then says you again: "I suppose you don't earn half a sovereign so easy every day;" and you put that rather harsh, to save my feelings and make me think it wasn't charity. I've thought of that often; and I've said to myself: "Send that man round to me if ever he's in trouble, and I am game to my bottom dollar." I have not your sense of touch, sir, in these matters, but I was deeply grateful, and I've had a liking for you ever since. I took a foolish way of showin' it, and hurt your feelings. But now, I've apologised, and you have looked over my clumsiness, and now—clean straight—I'm worth five pound. Is half of that any use to you?'

'My good fellow,' said Gerard haughtily, 'you are quite mistaken in supposing that I am in want of money. If I were, I should find other means of getting it, than by taking your earnings from you.' He was somewhat touched, in spite of his hauteur. Perhaps he was a little loftier in manner because he *was* touched, and did not care to show it. He read incredulously in Hiram's face; and to put an end to his doubts, he sent his hand into his pocket and drew out a mingled handful of gold and silver. 'I am not in immediate danger of starvation,' he said lightly and in a kindlier tone.—Hiram felt the friendliness of this revelation, instinctively. He did not stop to think it out, but he knew that Gerard

would rather have submitted to any misapprehension, than clear it in this way unless at the bidding of an impulse altogether friendly.—‘ You are a good fellow, Search,’ said the gentleman, reaching out his right hand. ‘ You misunderstood my position—that was all.’

Hiram pushed out his lean claw at arm’s length and executed a solemn shake手s.

‘ I am glad to see,’ he answered, ‘ that I am not such an ass as I thought I was. You laughed just now when I called you an aristocrat. But I was not mistaken.’

Gerard laughed again. ‘ This open expression of opinion is a little embarrassing, Mr Search.’

‘ I beg your pardon,’ said Hiram gravely; ‘ I will not offend again. I have not your sense of touch, sir. I am not an educated man, and I am not acquainted with the ways of society. But I will not offend again.’

‘ What have you been doing since I saw you last?’ asked Gerard, anxious to atone for his misunderstanding of Hiram’s gratitude. The man’s downright simplicity and truthfulness attracted him. Hiram began to tell his story. Neither of them noticed that the outer door had all this time been left unfastened, until, in the midst of Hiram’s narrative, a great hammering began upon it, and Gerard arising to open it, met Val Strange and the lawyer in the lobby.

‘ Mr Lumby,’ said the old lawyer, directly he set eyes upon him, ‘ let me congratulate you! We have recovered everything that villain Garling ran away with. You are a wealthy man once more.’ This was a burst of singular indiscretion for so discreet a man; but the old boy had had the news pent in him for ten minutes; he had been a dear friend and old schoolfellow of Gerard’s grandfather; he had been his father’s adviser this thirty years past or nearly; and he was more puffed out and explosive with joy and triumph than a legal authority of threescore years and ten can endure to be with safety.

The result of the communication thus made was alarming; and Gerard, beneath the little gaslight in the lobby, turned so pale, and made so blind a clutch at the doorpost, that the lawyer caught him on one side, and Val Strange on the other, and led him back into the room, where he sank into a chair, hid his face in his hands, and sobbed hysterically.

‘ Really, my dear Gerard,’ said the little old lawyer, standing over him, patting his shoulder, and trying to cover his own error by disregarding the effect it had upon the other, ‘ we must have a little jollification on the strength of this discovery. Really we must. Perrier-Jouet must flow for this, sir. Pommery-Greno?—the life-blood of the Widow Clicquot?—what shall it be?’ All this time, he was patting and smoothing away at Gerard’s shoulder.—‘ Mr Strange,’ he cried, not ceasing this friendly attention for a minute, ‘ we ought to have supplied ourselves upon the way. It is all due to our friend Mr Strange, under Providence, that this amazing discovery was made, Gerard. Your friend Mr Strange is answerable for it.—Come, come, come; you’ll get up and say “Thank you” to Mr Strange, surely. A quarter of a million is worth saying “Thank you” for. Come, come, come.’ Running on thus, to cover Gerard’s confusion and his own, he patted

and soothed until Gerard raised a pale face and looked around him.

‘ What hit me?’ he said, ‘ was the thought of the poor old governor. If it all came back, it would be too late for him.’

‘ No, no, no!’ cried the little lawyer. ‘ Let us hope not—let us hope not. Let us trust in Providence. He will recover, and spend many happy years, I trust—many, many happy years.’ And that ancient lawyer, in spite of his face of parchment, and the legal inner dust of fifty years, sat down and wept for joy. In all his threescore years and ten he had known no greater grief than the fall of the great House. A placid equable life of threescore years and ten, with a little love-making in it, so far back that his old love’s grandchildren were common-councilmen, and nothing to mark its even tenor since those far-off days, but two strong friendships. The two dearest friends he had ever had were Gerard’s grandfather and father. Why should he not feel a touch of sacred, friendly joy again? But the old man’s emotion killed Gerard’s; so far as show was concerned at least. The two young men shook hands with each other and with the lawyer; and he, conscious of human frailty, made great efforts, and pulled himself together, and the three sent out for wine, and made bright speeches, and tried to be merry—with the ghosts about them. Constance for Val’s ghost. Gerard’s father with wrecked intellect and blighted life for the old lawyer’s. Both for Gerard, and his pale mother seated between the two. And so the wine ran dull somehow in spite of its sparkle, and suddenly Gerard, in his attempt to be gay, bethought him of Mr Search, and made inquiry for him. Hiram had disappeared.

Hiram indeed was by this time in his own lodgings, pulling at the black clay by the side of a guttering tallow-candle. ‘ I am glad of his luck,’ he said heartily; ‘ and it’s a sort of weight off of me somehow that Mary’s father has dropped that ill-got load. I’d have liked to have congratulated him; but I daren’t stop for a word. It might pay a waiter too well to look honest, to congratulate a millionaire, when you’ve just lent him seven-and-sixpence.’

When a second bottle had been opened, and one libation poured to Fortune, the lawyer took his leave, and the two young men remained together. Val was very bitter inwardly, and Gerard’s thanks were wormwood to him. Gerard was all gratitude and grief and hope, a very compound of contradictory emotion; Val, all rage, watchfulness, and despair. In his weakness, he was for a moment enraged at his own fealty to honour. Why should he have played such a card as he held into Gerard’s hands, until he was sure of his own end? He was keenly on the watch to draw forth or catch the news of Constance’s whereabouts. He half despaired of winning now, for he had cast the winning card away, and so far once he drank deeply, talking the while with a feverish attempt at gaiety, and pushing the conversation, whenever he could, in the direction of Gerard’s hopes. For a long time, nothing came of this, but at last Gerard said: ‘ I shall cross to Paris to-morrow, after seeing the governor.’

‘ Ah!’ responded Val, with well-concealed interest. ‘ What is going on there?’

'Why,' said simple Gerard, 'you know of course that when this smash came, I was engaged to be married. That went by the board, with everything else. And now it's the only thing I care for, that it sets me right in that respect again. We shall have to divide with my cousins, of course—the poor old governor is out of it for ever, I am afraid—but I shall have enough left. You heard what was said just now. Their share is not more than fifty thousand apiece. That leaves a hundred and thirty-three thousand to the governor, and the old house and my mother's property, besides what is saved from the smash. We are as well off as ever, thanks to you, old fellow. We haven't as much money, of course, but we have more than we shall ever want to spend.'

'And so you're going to Paris to-morrow?' said Val, bringing the conversation round again. It was horrible to listen to Gerard's talk of certainty, but he must listen, to learn what he wanted to know.

'Yes,' said Gerard. 'I shall see my mother in the morning, and break the news to her, and see the governor, and then cross over.'

'Are they all staying there?' asked Val, pouring out a glass of wine, and pressing the neck of the bottle tightly against the glass, to prevent them from clanking in his agitated hands.

'Yes,' responded Gerard. 'Constance has not been well lately, and Miss Jolly—that's her aunt, you know—insisted on going to Paris for a change.'

'Where are they?' asked Val. His voice veiled his own tremor and despair so ill, that he was almost amazed to see it go unnoticed.

'At the Grand Hotel,' Gerard answered; and being no further questioned, slipped into silence.

Val sat on thorns a while, and then took leave. Once in the street, he ran until he found a hansom, and was driven to his chambers at full speed. His luggage was undisturbed. He bade his man carry it out to the hansom, and side by side with his valet, drove to St Katherine's Docks. The boat for Boulogne started that night at eleven-thirty, and was caught at the moment of departure. An eighteen hours' passage would land him at Boulogne at half-past five, in time for the six o'clock slow train for Paris. Even that gave him some faint hope of seeing Constance before she retired for the night. Gerard, starting on the morrow, would leave Charing Cross at half-past seven in the evening, would reach Paris at six in the morning, and would possibly go to bed to snatch a few hours' sleep. There loomed another chance.

Half the gloomy night, Val paced the deck; and at last, with a greatcoat and a rug, lay down upon it, beneath the clouds and the solemn rifts between them sown with earnest stars. There was but half an hour to win by, and the thought kept him awake, in a panic of hope and fear. Slowly the stars faded; the intense depths of sky grew gray; the clouds, which had been gray, grew black; the bleak sunlight touched the sulky Channel billows. He rose again, and paced the deck, and looked at the Kentish coast, still in sight, and sickened for the journey's end. All day long, time crawled, and his veins fevered, and his watch seemed to stand still. But five

o'clock saw Boulogne harbour; and then, whilst the hands of the watch suddenly ran with great rapidity, the boat seemed to crawl on the water. Half-past five, and the harbour scarcely seemed nearer. At six minutes to six they moored beside the Port, but on the wrong side for the railway station. Seven minutes later, Val stood upon the platform, and looked after the last carriage of the retreating train.

He waited with racked patience for the next train. Perhaps after all Gerard might miss it—might somehow be delayed. The slow deliberate seconds, the leaden-footed minutes, the dreary, dreary hours, went by. The mail-train drew up at the platform, and he took his seat. Everything was silent, and the place seemed asleep, until the sudden flare of gas and the sudden rush of storming feet, told the arrival of the mail passengers. He would not look to see if Gerard were there or not. Fortune had been against him all along, and would be against him still. He set up the big collar of his travelling-coat, and pulled his cap down upon his eyes, to escape a possible recognition. The clamour and bustle died away on the platform. The signal sounded. The carriage answered with a jerk to the first motion of the engine, and at that instant a passenger opened the door of the compartment in which Val sat, and leaped in lightly. It was Gerard Lumby.

(To be continued.)

#### QUEER CASES.

BY A SURGEON.

IN TWO PARTS.—PART II.

WHAT is more troublesome to surgeon or patient than a needle broken off short in the flesh—unless it be two broken needles? Such articles 'travel' terribly. There is so little to lay hold of with the forceps, that any touch which does not effect its extraction is bound to give it an onward impulse. Thus it often happens that a medical practitioner can find no trace of the needle, when his assistance is sought, the patient having already pushed it completely in, in his efforts to withdraw it; and it may become a matter of doubt whether such a thing is really underneath the skin or not. To cut open the flesh on a mere chance of finding it, would be obviously unjustifiable; examination of the part by pressure and squeezing is nearly as bad, from the risk of making matters worse; so an ingenious plan has been devised for ascertaining whether a portion be really impacted or not. A powerful magnet is held upon that part of the body for a quarter of an hour, so as to influence the fragment; then a finely-hung polarised needle is suspended over it, when, if any iron be present, deflection will ensue. In Italy, a kind of ivory probe traversed by two wires has been used for the detection of foreign bodies of this nature in a deep wound, it being connected with an electric battery in such a way that directly the probe comes in contact with anything metallic, the circuit is completed, and its presence announced by the ringing of a bell!

Not many years ago, a remarkable experiment

was tried at the Hôpital dos Lazaros, São Christovão, near Rio de Janeiro. A Brazilian physician pretended to have discovered that 'beriberi,' the mysterious and deadly malady of that country, half-dropsy, half-leprosy, was identical with the true *Elephantiasis Græcorum*, which the ancient exponents of the healing art used to cure by inoculations of snake-venom. An inmate of the hospital, knowing his state to be hopeless as it stood, consented to allow the trial to be made on his body. So a vigorous rattlesnake was accordingly brought to his bedside, and made to bite his swollen and hypertrophied hand, in the presence of a large number of doctors, both native and foreign. It was noted at the time that the reptile displayed great apparent reluctance to use its fangs, and it was not until after much irritation that it could be induced to strike. The punctures were inflicted near the base of the little finger; but the patient was not aware that he had been bitten till the bystanders told him, so lifeless was the part. For some hours, no results were apparent ; the characteristic evidences of blood-poisoning nevertheless set in, and before night the man was a corpse.

The case excited a great deal of interest at the time ; but the experiment has never been repeated ; nor is there any reason why it should be. The reception of the venom into a mass of fibroid and degenerate tissue such as would compose a leprous limb, would retard and might altogether prevent its absorption into the current of the circulation ; while it was pure fancy to attribute the snake's hesitation in biting to anything connected with the disease. Many poisonous reptiles will bear much annoyance, and even ill-treatment, before they can be persuaded to use their fangs ; and the case in question really presents no anomalies whatever beyond those to be readily accounted for by the existing circumstances. But what a marvellous thing the venom of a serpent is ! In the whole range of pathology, probably nothing presents such an instance of small causes producing great effects. An infinitesimal quantity of a clear, apparently harmless fluid, introduced by a puncture no bigger than the prick of a pin, and with awful rapidity—a few minutes, it may be—a strong man with the thews and sinews of a bull, becomes lifeless clay, already far on its way to decomposition. Perhaps the 'germs'—if such really exist—of deadly fevers and other maladies might be found to be just as insignificant in amount, could they be isolated ; but it must be borne in mind that there is a certain period of latency or 'incubation' after their reception into the system, and that neither they nor almost any other known poison take effect with the same fearful celerity as the worst snake-venoms.

The accidents, fortunate and unfortunate, that have occurred within the practice of celebrated surgeons about whose skill there can be no two opinions, would fill a volume. Dupuytren plunged a knife into a man's brain, and relieved him of an abscess in that situation, snatching him from the very jaws of death ; yet he killed a patient whose shoulder-joint he had set, by lancing an aneurism in mistake for a simple gathering. And for every such accident which has happened, probably a hundred might be

found, were the truth known, that have been prevented only by what we are accustomed profanely to term 'sheer luck' or 'chance.' I was once clinical pupil of a great London surgeon, one who even then was quoted universally as the greatest authority on the disease of which the case I am going to relate was an instance, and whose public appointments had long testified to the general recognition of his talents. In one ward of the hospital he had a patient who, he told us, was suffering from an abscess in the region of the hip ; carefully demonstrating this to us, as he was wont to do, and explaining how such a disorder was to be diagnosed from other things with which a want of due precaution might cause it to be confounded. He then ordered me to get ready his instruments and chloroform by the bedside, as he proposed to incise the swelling when he had finished his round of visits in the hospital, and proceeded on his way ; but before he returned, the man suddenly and mysteriously died, without a movement or a groan. There was a *post-mortem* examination of course ; and it was then found that what had been mistaken for an abscess was in reality an aneurism, which had burst of itself internally, and caused instant death by loss of blood. An aneurism is a localised dilatation of an artery, which goes on increasing in size quite out of proportion to the blood-vessel itself, so that the sac may be as big as an orange—as it was in this case—or even larger, upon an artery no bigger than a goose-quill. The chief danger in such a tumour lies in the possibility of its bursting at any time, and to lance it would, of course, be almost necessarily immediately fatal. 'Gentlemen,' said our Professor, as the mystery was revealed, and the terrible position from which he had so narrowly escaped became apparent, 'the French have a proverb that there is a special providence for drunkards and children. I say there is a special providence for surgeons !'

Nature is a wonderful surgeon ; she commences a conservative process of repair directly after an injury. 'Never too late to mend,' is her motto. An old man, of the enormous age of one hundred and two, came under my notice with a broken hip—that commonest of fractures among elderly people, whose bones are dry and brittle, often caused by accidents so slight as tripping the foot in a loose fold of carpet. No active treatment could be adopted ; mechanical appliances would have caused mortification of the skin in a subject enfeebled by senile decay ; so he was placed on a water-bed and kept wholly at rest. He lay there for twelve months, suffering but little pain, and then peacefully passed away, having ended his long life in comparative comfort. After death, it was found that the fracture had actually healed, though naturally in a false position.

A disagreeable little *contre-temps* happens sometimes to young practitioners who are called upon for the first time to set a dislocated jaw. It rarely happens twice to the same operator. When the jaw is 'put out,' the hands, to effect its reduction, must grasp it over the teeth as far back as possible, so as to exert force in the necessary direction on the angle. It is often no easy matter ; but when it does slip in, it goes back so suddenly that the mouth shuts to with a snap like a rat-trap ; and the young surgeon

draws an inference that for the future it will be better to shield his fingers with cork or india-rubber in dealing with cases of this kind.

It is a well-known fact that people whose limbs have been amputated tell you that they can feel their fingers and toes for a long time afterwards—for years, sometimes—and will even describe pain and definite sensations as affecting certain joints of individual digits. This is readily understood when we remember that the brain is the only part of the body that *feels*, all sensations and impulses being conveyed to it from different parts by nerve-fibres. Feelings of pain, heat, cold, touch, and the functions of the special senses are telegraphed to it; and when the connecting nerve is divided, it may be some time before it learns to localise truly the seat of the sensation it appreciates. When we knock our ‘funny-bones’, we experience a thrill in the little finger and inner border of the hand; the fact being that we have stimulated the bundle of telegraph wires—known as the ulnar nerve—which transmit sensations from that finger and part of the next, in the middle of its course, as it winds round the joint of the elbow.

Some years ago, a nurse in one of our Metropolitan hospitals, mistaking one bottle for another in the dim dawn of a foggy morning, gave a poor woman a teacupful of concentrated carbolic acid, instead of black draught. The unfortunate patient drank half of it, and might have taken it all before discovering the mistake, had she not paused for breath. She died in great agony in a few minutes. Medical men were of course on the spot; but nothing could be done. There is no antidote to carbolic acid; and the mouth, throat, and—as we afterwards found—the stomach were so burnt that it was impossible to use the stomach-pump; they were in fact charred white, like a stick. It appears extraordinary that any one should drink such a quantity of a fluid so intensely corrosive as this acid without finding the mistake directly it touched the lips; but medicines, never agreeable, are usually swallowed as hastily as possible, and the patient does not stop to analyse any specially unpleasant sensations, when he knows that some such are inevitable.

A curious parallel to this case was brought before me at sea, where a quartermaster went into the cabin of an officer on watch in the middle of the night, and seizing what he took to be a bottle of brandy, drank about six ounces of the contents. It was pure carbolic acid, and the man fell dead before he could summon assistance; but here, too, we may account for the large amount swallowed before the character of the liquid was recognised. He was consciously in the commission of a theft, and being, moreover, in danger of detection every moment, no doubt hurried to secure the brandy as rapidly as he could, the expected fluid being also of a burning nature to the palate and throat. In this last case, the carbolic acid, though not in its own characteristic bottle, was labelled ‘Poison,’ and was kept in the officer’s washing-locker. The quartermaster had no doubt caught sight of the bottle there, and imagined it was stowed away for concealment. About a tablespoonful of this excellent disinfectant in the morning’s bath is a great luxury in the tropics, not only allaying the

maddening irritation of existent ‘prickly-heat’ and insect bites, but acting as a preventive to other eruptions, and offering a discouragement to mosquitoes and other pests of these regions.

#### PLAYING THE WRONG CARD.

IN FOUR CHAPTERS.—CONCLUSION.

MR STYLES sat silent and stupefied, after the departure of his colleague. The pipe had gone out, and was not rekindled; while the jug of beer, which had given point to the sarcasm of Charley—as he still called him in his reverie—remained untouched at his elbow. The situation was indeed a serious one for the unlucky Professor. He had been buoyed up by the prospect of this unexpected windfall; he had seen his way to taking larger halls, and ‘working’ larger towns for the next week or two at anyrate, by its help; and now it had utterly vanished, plunging him, as a matter of course, as deep into despair as its prospect had raised him into hope. He had sent the baggage-man and the properties on to Bingledon, where he was announced to open the next night; a deposit was paid on the large room at the Town Hall; bills by this time were circulated, his posters had been out for some days. And now all this trouble was lost; his outlay was forfeited. He could not open by himself. Even if a musician could be found in Bingledon, a thing hardly likely in so sedate and prim a town—such a musician as would suit *him*—what was he to do without Lucile? Her loss was utterly fatal to the speculation; in fact, her loss would be fatal to his business altogether. His slender resources would not, could not, hold out until he had replaced her. His properties would be seized, and he should be ruined. ‘My health’s a-going,’ he muttered, as he reached this stage of his reverie; ‘and I shall have to go to the workhouse. I little thought when I took old Ben Boley half-a-crown and a pound of tea last year, that I should so soon come to be where I saw him; but it’s what I am coming to.’

A tremendous knock at the street door interrupted and startled him. He listened with a foreboding of some fresh evil; but ere he could determine who was the visitor, the door of his room was thrown open, and Mr Ignatius Hythe came hurriedly and excitedly in. ‘Here’s a pretty go!’ exclaimed that gentleman, who could scarcely gasp out the words—‘here’s a pretty go! Where’s that confounded foreign scoundrel? He has done it! A nice thing I have made of it by employing him.’

‘What has he done? I should really be glad if you would tell me,’ returned Styles; ‘for he has been here talking in crazy style about being revenged, and says he is actually the person we employed him to represent.’

‘So he is!’ cried Hythe. ‘The vagabond was just the last man in the world we ought to have spoken to. He has nearly killed my brother, and has entirely ruined me.’

‘What *has* he done?’ exclaimed Styles, who was partly excited and partly frightened, as his visitor plunged frantically about the room. ‘How

has he killed your brother? How has he ruined you?

'He has given my brother a shock from which he will never recover,' said Mr Ignatius; 'he has had a fit in consequence, and in his weak state it will be fatal. But he has actually seen his daughter! This abominable foreign musician, or whatever you choose to call him, is her uncle. He showed her to Maurice. He took her away with a threat that Maurice should never see her again. What is the consequence? My brother now knows that she is alive, while previously he only dreamed it. His conscience, which was morbid and troublesome enough before, is now irresistible. He means to telegraph for his solicitor to-morrow. He will alter his will in favour of this child, so that now we shall get nothing at all! If she had remained here, it would not have mattered, as he would have been content with providing for her, and compensating by kindness for any wrong he had done; but he regards what has now happened as a judgment, and that on account of it he is bound to mortify himself and all his friends.—And by Jove, sir, it is mortifying!' concluded Mr Hythe, with an abrupt change of tone.

'Well, what are you going to do? What do you want me to do?' asked Styles. 'He has entirely broken up my tour. I have billeted my two next towns, paid a deposit on the hall at Bingledon; and here am I without a chance of giving the show, and hardly enough money left for my railway fare.'

'Oh! here's some money; take it; I want your help,' exclaimed Hythe, throwing a number of sovereigns on the table.

With sparkling eyes, the Professor scrambled them up. 'Well, what help do you want from me?' he asked.

'We must find this fellow; we must get back the girl!' returned Mr Hythe. 'Confound him! He has no right to keep her from her parent. It's unnatural—it's atrocious. If I can get hold of her, I have not the least doubt, from what I know of my brother, that we can manage him very well. So we will follow this foreign scoundrel, and catch him if we can. I will claim the girl, and call in the police if necessary. Gad, if it's necessary, I will seize her by force, and you must back me up!'

'Oh!' ejaculated Styles, with a perceptible lengthening of his visage; 'I don't altogether like that idea. He's a dangerous fellow, and he carries the ugliest knife you ever saw out of a butcher's shop.'

'I don't care for his knives or any of his foreign tricks!' exclaimed the desperate Ignatius. 'I'll knock him down with my stick, if we really come to a fight. But for the matter of that, I would just as soon be run through the body as not, if we don't get the girl back.'

'Ah! but I wouldn't,' said the cautious Styles; 'and I give you fair warning that while I will do all I can in the way of persuasion, or will back you up in case we fetch the police, if it comes to fighting—keep me out!'

'I'll do that part of the business,' said his resolute visitor. 'Rather than not keep my brother from altering his will, I would face twenty foreigners with twenty knives apiece.'

—Now, come on. How shall we get on his trail?

'That won't be very difficult to begin with, at any rate,' said Styles. 'He must have gone by rail, if he has gone at all; and a little gossiping place like this has one advantage—everybody knows everybody; and I'll defy such conspicuous characters as Charley and Lucile to take tickets without their being known and their destination remembered. We are right for the first stage, I am certain.'

'Then on with your coat, and off we go,' continued Hythe. 'If there's a train any time tonight in the direction they have taken, we follow.'

'But about Bingledon?' began Styles.

'Let Bingledon shift for itself! The people at Bingledon can do without you, I daresay. Telegraph in the morning, or do what you like; but let us lose no time now.'

Thus urged, Mr Styles had no option but to comply. The sovereigns that had been so lavishly thrust upon him softened in a wonderful way his feelings regarding the disappointment of the good people of Bingledon.

In a few minutes they had left the house, and were at the railway station, where the correctness of Mr Styles's judgment was at once made manifest. The clerk and porter each recollected the departure of Mr Joinville, as they called him, accompanied by Mademoiselle Tuscano, and recollected also that they had taken tickets for a station named Bushfield. The night-mail, due in about an hour and a half, stopped at that station.

'He will change there, and go across to Stumpy, which is on the South-western line,' said Hythe. 'He means to go on to Southampton, and take a steamer for America; that's his game.'

'But I don't think he has enough money,' said Styles.

'Oh! there's never any telling with these foreigners,' interrupted Hythe. 'He may have been screwing and saving up ever since he has been with you.'

Mr Styles made no reply to this suggestion; but by an expressive frown and shake of the head, he might have been of opinion that 'Charley,' as he still called him, was not likely to have saved much while in his company.

To follow their journeys in quest of the fugitives would only weary the reader. Suffice it, therefore, to note that Mr Hythe and Styles at length found themselves—*en route* for Southampton—at Bushfield Junction.

The junction was at a very lonely spot; a straggling village was the nearest approach to a town for several miles; while out on the bare downs beyond, or in the narrow dull lanes which served for byroads, there were but few cottages to be seen, and still fewer buildings which deserved the name of farmhouses. So there was little to invite any one to go strolling about in the quiet light of the sinking sun, which was now just visible above the low hills which bounded the view to the west. Thus argued Styles; but Hythe was of a different opinion. Luckily, however, he did not deem it necessary to insist on the Professor accompanying him in his ramble; and so, comfortably ensconced in the village inn, with the London paper to

read, his legs resting on the long seat, the oft deferred meal at last served, Styles awaited his companion's return without impatience.

Mr Hythe, restless as before, soon got beyond the limits of the village, and crossed the wide common which lies immediately beyond. He then turned to retrace his steps, as twilight had set in; and the occasional barking of dogs reminded him that it might be unpleasant to find his way back after dark. Passing one of the few houses which were of somewhat better grade than the poorest labourers' cottages, he saw a woman standing at the door, who looked so earnestly at him, that he thought she was about to speak. Slackening his pace, he looked fixedly at her in turn. The woman noticing it, said apologetically, and dropping a rustic courtesy, as she spoke: 'I thought, sir, you might be Dr Camm, or some one from him; that's what I was looking out for, sir.'

'I am sorry you are disappointed,' replied Hythe. 'I hope you have no serious cause for wishing to see a doctor.'

'Indeed, I have, sir,' said the woman; 'and I am afraid Davy—that's my boy, sir—hasn't found Dr Camm at home, he has been so long gone.'

'I have been a doctor, although now retired from the profession,' said Hythe. 'If I can be of any service till your own doctor comes—'

'You are very kind, sir,' replied the woman, as Hythe paused; 'and if you would not mind looking in, I should be a great deal easier in my mind. We have had a gentleman and little girl staying here for a day or two.'

'Eh? a gentleman and little girl!' repeated Hythe, roused into the keenest attention at once.

'Yes, sir,' she continued. 'They are foreigners, I think; and he is mortal bad to-day. I think he is going out of his mind, as well as being dreadful ill, sir; and the little girl is so frightened.'

'Where is he?' exclaimed Hythe, in a decided tone. 'I will see him at once.'

'I don't know, sir,' said the woman hesitatingly, 'whether he has got any money; and we are too poor—'

'Oh! that is of no consequence,' returned Hythe, with a readiness which at once impressed the poor woman with a sense of his generosity. 'Just show me to his room.'

The woman turned, and led the stranger into the front-room, which, meanly furnished as it was, was evidently the best parlour of the house. A low moaning sound was audible as he entered. 'That is the poor gentleman, sir,' she continued. 'He is in the back-room. I will go and see if he is sensible.—This gentleman is a doctor, my dear, and will cure your uncle.' This last phrase was addressed to a girl who sat cowering and shy in the darkest corner of the apartment.

Hythe had not seen her until he followed the direction of the woman's eyes. 'Ah! it's all right! I have her now,' was his mental ejaculation. The girl looked up at him without any recognition in her eyes.—'This is a strange place for you, my dear,' said Hythe. 'I know from the landlady that you have not been here long. Were you about to settle in this village?'

'No; I think not, sir,' replied the girl. 'I hardly know what Mr Charles was going to do; I think he meant to go back to America.'

'I was not far out in my guess, then,' thought Hythe.

The return of the woman stopped further conversation; and he accompanied her to the bedroom, where, restlessly turning on his couch, lay the man whom he had sought.

As would have been the case with every other doctor, personal feelings, likings and dislikings, all ideas of danger to himself from this man, were instantly banished, and Hythe saw in him only a suffering patient. 'His brain is dreadfully affected, and he is in great danger,' said he to the landlady presently. 'I think it is more than probable that he will die here.'

'O dear me! deary me!' exclaimed the poor soul, wringing her hands. 'Whatever shall we do? My husband has been out of work these four weeks with a bad hand.'

'I will wait until I see your local doctor,' continued Hythe; 'and will ask him to send a nurse down to assist you. As it strangely happens that I know this man, I will be responsible for all expenses, and will take the girl to her friends. There is a person waiting for me at the *Half Moon Inn* at Bushfield, to whom the little girl is well known. Can you send for him?'

'O yes, sir!' exclaimed the woman, whose face had brightened considerably. 'I do think I hear our Davy outside now. He will go.'

She was correct. Davy came in with the news that he had been waiting until Dr Camm returned; that he had seen that gentleman, who had promised to follow him in a quarter of an hour. Stimulated by the promise of a shilling, Davy lost no time in hurrying back to Bushfield as fast as his heavy, clay-clogged boots would carry him, bearing Mr Hythe's card, with a request for the immediate attendance of Styles.

The doctor arrived first, and promptly coincided with the opinion already expressed by Hythe as to the fatal nature of the illness. He readily agreed to find a nurse, and took charge of a few pounds which Hythe left in his hands for current expenses. As he did so, a little bustle was heard in the parlour, followed by an exclamation of delight and surprise from the girl. With a word of apology for his abruptness, Hythe hurried to the room, where he saw, as he expected, the girl clinging round Styles's neck in a transport of delight.

'Have you come to take me back?' said the child. 'I do not love Mr Charles as I love you.' (She had been taught to speak of him always as 'Mr Charles' in the company.) 'He does not love me at all. Do not send me away again!'

'No, Lucile, never; you shall never leave me again,' said Styles; 'that is,' he added, as he recollects the claims of Mr Maurice Hythe, 'you shall never go anywhere but where you please, and where you are happy.—She always took to me, you know,' he continued in a low tone to Mr Hythe. 'We have been together these two years, and I always considered her as my daughter.'

The girl would not part from Styles; and so, holding his hand, she presently set out to walk to the junction, Hythe following closely, after a final consultation with the surgeon, who

promised to let him know, by telegraph, the patient's state in the morning—if he lasted till then; but unless some unlooked-for change took place, he probably would not hold out.

Catching an early train, the three reached Fieldenham by midnight, where, under pretence of not disturbing their landlady, and after repeated promises from Styles to call for her the next day, the girl consented to go to Myrtle Villa to sleep, and there met with a warm reception, Mrs. Hythe being quite as much alive to the importance of her restoration as was her husband.

In the morning, Styles came round punctually; and as he came to the gate, there arrived also a telegraph messenger, whose tidings were brief, but final—Villada was dead. There was an unavoidable shock in hearing this; but both Hythe and Styles were secretly conscious of a feeling of relief. Lucile—we shall for the brief remainder of our story preserve her old name—who had had no idea of his danger, was not told of his death for some days.

Early in the forenoon, as may be supposed, Mr. Hythe took the girl round to his brother, who was now so weak that he could not stand, and was lying on a couch which faced the window; but the interview which followed shall be outlined in the description given of it by Mr. Ignatius to his wife.

'It was like a resurrection, Maria! If you had seen a ghost, you would not have been more frightened than at seeing that panting, hollow-eyed fellow rise up with a sort of scream.—But she wasn't frightened; not a bit. How she knew he did not mean her any harm, I can't say, but she took to him directly. He says he shall get well now; and I believe he will—I had a long talk with him, and it will be all right, Maria.'

It was all right, from the Myrtle Villa point of view. Delighted at the restoration of his daughter; thankful for the opportunity of undoing his wrong in part, at least, Maurice Hythe became a new man; and never forgetful that it was to his brother's energy and wonderful sagacity he owed these boons, his lawyer was again summoned, and the will was this time altered in a manner which gave general satisfaction.

A very handsome present to the poor woman at Bushfield Common raised her to the seventh heaven of delight, as it did also her husband who had the bad hand, and 'Davy' the messenger; while Mr. Styles— But he also shall speak for himself. He often did speak of himself as he sat over his glass of grog in the select parlour of the *Three Blind Mice* at Kentish Town, N.W., which hostel stands at the corner of the street in which were situated Mr. Styles's apartments. 'And that's how it was, sir,' he would say, when finishing his oft-repeated narrative. 'The tour which I thought was going to be a complete bust-up for me, was the making of me. The loss of my dancer and my pianist, which made me think of the workhouse, was the only thing, as it turned out, which could have kept me from it. I never went a tour again, and never shall now, and I don't want to. She don't forget the old man, sir; and if I ain't rich, I ain't poor, and I can jog on quiet and comfortable, as long as I've got the breath

to do it. This is the only time, sir, I ever knew a game won by playing the wrong card, which was what we certainly did when we put Charley on the business.'

#### BOOK GOSSIP.

THE study of history seems to be increasing both in attractiveness and popularity. This may be due as much to the brilliant literary talent which has been brought to its service, as to its own inherent interest and value as a subject of study and means of culture. There were great names associated with the literature of history in the last century—Gibbon and Lord Hailes, Hume and Robertson; but of these, the first two have alone maintained their places as historical authorities; Hume and Robertson being now read more perhaps for their manner than their matter—for their lucid and original style, rather than for the accuracy of their historical presentations. If we have not many greater writers in the present century, we have at least better historians. Moreover, the methods of historical investigation have improved so much within the last fifty years, that history may almost be said to be an invention of the nineteenth century. To more accurate and scientific methods, also, have been added many attractions in regard to the style and treatment of historical narrative. It is not now confined simply to the relation of state intrigues and great military conflicts; it is recognised more and more as a means by which the life of a *people*, rather than the history of a kingdom, is to be traced to its sources. The story of the political struggles and social throes which gave birth to the most precious of our constitutional and civil rights, is of more interest, because fraught with more instruction, than the record of armed conquest and battles and bloodshed. The simple narrative of the Ship-money episode in the reign of Charles the First, is more illustrative of a people's progress, and hence of greater value to the historical student, than the history of all the battles that were fought and won in the campaigns of Marlborough.

Nor is it alone to the more mature minds and the more advanced readers that modern historians appeal. We have short histories by men like Green and Freeman, in which all that is essential to an intelligent appreciation of the historical problems presented, is laid before readers in language which the youngest need not fail to understand. Other writers have followed the example of these greater names; and among works of this kind we have pleasure in noticing the volume entitled *Charlemagne*, by the Rev. Edward L. Cutts, B.A. (London: Society for Promoting Christian Knowledge). This is really a history of the Franks from their first inroad into the Roman Empire in the reign of Gordian, down to the death of the great Teutonic emperor whose name gives title to the book—a period of about four hundred and fifty years. The life of Charlemagne embraces the period between 742 and 814 A.D.; but some knowledge of the early settlement and inroads of the Frankish barbarians is necessary to an intelligent understanding of the reign which forms the central subject of the book. This the author gives with commendable brevity,

and at the same time with clearness and spirit. The style is familiar without being flippant; and the author draws for his materials upon the more picturesque among ancient and modern authorities. The story of Charles the Great, as thus told, will not fail to be useful to many who have not the leisure or means for studying more elaborate works. A knowledge of what this great Emperor did, and what he aimed to do, is essential to a clear understanding of European history in mediæval and modern times, and may be said to lie at the very root of it. This volume by Mr Cutts will render the subject accessible to any who have the desire to acquaint themselves, briefly, clearly, and comprehensively, with the leading characteristics of the person and history of this great mediæval monarch.

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A vivid idea of some of the treasures of the Boolak collection of Egyptian antiquities at Cairo, may be gleaned from a book recently published from the pen of Mr Villiers Stuart of Dromana, M.P. *The Funeral Tent of an Egyptian Queen* (London: John Murray) is the title of this work; the greater portion of the book consisting of a description of the remarkable tent or canopy which—as we have noted in our article on Recent Egyptian Discoveries—belonged to one of the royal mummies recently brought to light at Deir-al-Bahari. A representation of this wonderful work of art, composed of hundreds of pieces of leather carefully dovetailed together, is printed in colours; and we learn that the tints of the original work, here reproduced, are almost as fresh as they were when first the pigments were coaxed into such quaint characters nearly three thousand years ago. There are many other features of this book which will cause it to be valued as an addition to our knowledge of the treasures of ancient Egypt.

The beetle, as is well known, figures prominently on all Egyptian monuments, and is represented in the above canopy as flying with a ball upon his head. Mr Villiers Stuart gives a plate representing in various attitudes a beetle of this description which was caught by himself, and he accompanies it with an interesting description. The male is furnished with horns, these horns enabling him to perform a duty which is peculiarly his, namely, to carry balls of wet Nile-mud balanced on his head, for his mate at home to deposit her eggs in. The female is without these horns, and therefore cannot carry the pellet necessary for the security of the egg. The Egyptians, says Mr Stuart, having seen the beetles industriously rolling the globe of clay, like their emblem of the sun, and seeing them also during flight decorated with the horned disc, their emblem of divinity, came to the conclusion that they were worshipping the sun, and held them in corresponding veneration. Again, the egg deposited in the mud-pellet, after passing through the usual transformations, broke forth into life as a perfected scarabæus, and gave the Egyptians the emblem of life out of death. Hence its frequent appearance on the tombs and funeral vestments of ancient Egypt.

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In the City of London—that is, the City proper, as distinguished from the Metropolis in general—there is a large population which appear within

its bounds during the day, but disappear at night. They have offices in the City, but they do not sleep in the City. Consequently, when the census of London was taken in April last year, it was felt that, as being a *night* census, it failed to represent the true condition of that portion of London known as the City, and steps were adopted to have the defect rectified by the taking of a *day* census. The sum of twelve hundred pounds was voted for this purpose by the City Corporation, and the census was taken between the 25th and 31st of May following the Imperial census. The results of this special counting of the people have been published under the title of a *Report on the City Day-Census, 1881* (London: Longmans, Green, & Co.). Under the Imperial census, the number of people found to be in the City of London during the *night* was 50,526; but this number under the *day* census is found to be 261,061. That is, there are more than five times as many people within the City of London during the day as there are sleeping therein during the night. And not only may the City be said to be thus depopulated during the night, but this tendency of things is constantly on the increase. In 1871, the night census showed a population of nearly 75,000, as against the 50,000 of 1881, being a decrease of fifty per cent. within the ten years. No wonder, therefore, that the old City churches notwithstanding their many sacred and historic associations, are nearly empty on Sundays; seeing that the suburbs and surrounding towns connected with the Metropolis by rail and omnibus, draw more than two hundred thousand persons out of the City every working day at the close of business hours. The book affords many points of curious study to those who are fond of statistical information.

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To the number of popular books on science, in which the scientific spirit is not sacrificed to the mere demand for an hour's amusement or relaxation, we must add *Talks About Science*, by the late Professor Thomas Dunman (London: Griffith and Farran). Mr Dunman was one of the men who had to toil upwards more by his own energy and application than by the assistance of others; and like many more who have thus had the bloom of life rubbed off in the friction of their early years, his health was undermined, and he died young, leaving the world just at the moment when he was best equipped to serve it. This little volume has been prepared rather as a slight memento of his method of teaching, by which he was endeared to a wide circle of students, than as containing any original contributions to the general knowledge of the subjects of which it treats. These subjects are such as the mechanism of sensation, prehistoric man, volcanoes and coral reefs, ice and the ice-age, how the earth is weighed and measured, with papers on the stars, on atoms and molecules, and on the lobster and common frog. His lectures, of which the papers here printed are examples, were, says his biographer, enlivened by allusions to poetry and romance, and full of living interest; while here and there were flashes of quiet humour which won his audiences, and afforded abundant explanation of his popularity with his students. This applies to the papers in the book before us, which are

at once clear and precise as regards the information that is to be conveyed, and interesting and attractive in respect of the style in which that conveyance is effected. We have no doubt the book will prove eminently useful in arousing in the mind of readers a renewed interest in questions of popular science.

## THE MONTH.

## SCIENCE AND ARTS.

A FEW artists, bearing well-known names, wrote a joint-letter to the *Times*, praying that, if possible, precautions may be taken to save picturesque Cairo from the fate of Alexandria. A somewhat similar cry was heard from archaeologists, owing to the rumour that the well-known Boolak Museum—which in their eyes is the most valuable, if not the most picturesque adornment of Cairo—was to be sold to replenish the coffers of Arabi Pacha. This Museum owes its existence to the French antiquary Mariette Bey; and, as our readers are aware, it contains the principal part of those treasures and curiosities which the Egyptian tombs have from time to time revealed. In one way, the dispersion of these memorials of ancient Egypt—provided they found their way to the safe custody of European Museums—need not be regretted, for the building which at present holds them is said, from the undermining of the Nile, to be in a rather dilapidated state. But the mere suggestion that such a man as Arabi has cast a wistful glance upon them, raises fears that some of his fanatical followers may from utter wantonness destroy relics of their country's past which can never be replaced. It is to be hoped, however, that such a catastrophe may be averted.

Although civilised nations have left the records of their former greatness in their tombs and other monuments, those whose lives were spent in a savage state, and who had no such heritage to leave behind them, have not passed away into silence without leaving very distinct traces of their whereabouts. The 'kitchen-middens,' or vast heaps of shells which are now found on so many coasts, together with the bone and flint implements buried in them, tell us of the food and mode of life of these very early dwellers on the earth. Many attempts have been made to calculate the time which must have elapsed before these heaps of refuse could have attained the dimensions which they now exhibit; though a writer in a recent number of the *American Naturalist* endeavours to show in a very interesting manner that these calculations are likely to exaggerate the time necessary for such accumulation. His observations are directed to the Innuit tribes on the Alaska coast, who, in common with other savage people in various parts of the world, are at the present day contributing to its surface these remains of their daily meals. He tells us how he has watched a healthy Innuit family despatching their meals of echinus or sea-urchin—how their teeth crack the spiny shell, and how the luscious contents are licked out before the debris falls in a continuous shower to the ground. He says: 'The heaps of refuse created under such circumstances during a single season were truly astonishing in size. They

will surely mislead the ingenious calculator of the antiquity of shell-heaps a thousand years hence.'

The recent bombardment of Alexandria naturally gives a zest for naval and military information, and the following note, communicated to a contemporary by the Superintendent of the Royal Laboratory at Woolwich, giving as it does the particulars of the cost of each charge fired from one of the *Inflexible's* eighty-one ton guns, will be of interest:

Cartridge filled, 425 lb. P <sub>2</sub> powder.....	£10 2 0
Bag, bursting, filled.....	0 12 6
Shell, Palliser, 16-inch.....	11 16 5
Gas-check for do.....	2 17 9
Tube, electric.....	0 0 4

Total cost of one round.....£25 9 0

That is, in round figures, £100 for every four shots fired from the *Inflexible*.

It is reported that the Council of the Royal Geographical Society contemplate the equipment of another expedition to the 'Dark Continent,' in order to explore the mountains Kenia and Kilimanjaro, and the country which separates them from the eastern shores of Victoria Nyanza. This expedition is to be under the command of Mr Joseph Thomson, and will start on its mission early next year.

The Royal Agricultural Society have been very unfortunate of late years, owing to the persistent rain which has driven sightseers from their annual shows. The present rainy year has proved no exception to the rule; but as a set-off, the wet weather has called attention to two new modes of hay-making which would perhaps have been forgotten, or lost sight of, if the sun had been more generous with its beams. One plan which has already been in vogue for some years is that of Mr Gibbs, who by passing wet grass through a hot-air machine, is able at once to convert it into valuable hay. At the late Agricultural Show at Reading, six acres of grass, estimated to yield twelve tons of finished hay, were converted into dry hay in six hours; whilst, had it been allowed to lie on the ground, and left to the tender mercies of such weather as we have since had, it must have rotted and spoiled. The other process of saving wet grass is that of Mr J. Coulter. Mr Coulter does not use hot air, but directs all his attention to the construction of the haystack and to means for keeping it cool. His method of procedure is briefly as follows: In building the stack, an aperture, or rather inner chamber, is formed, by placing in the midst of the material a stuffed sack, which is withdrawn before the stack is complete. From the lower part of this chamber there is carried an air-shaft or pipe to an exhaust fan outside the sack. Apertures are also made in the stack for the insertion of thermometers. When the heat from the wet mass rises above a certain limit, the fan is set in motion; and while it extracts the saturated air from the stack, the outer atmosphere is dragged into it from every pore. In this way the temperature is rapidly reduced and the grass quickly dried into sweet hay.

The unseasonable weather has perhaps had something to do with the invention of a very clever little contrivance for recording the duration of rainfall. Most of our readers must be familiar with the form of the ordinary rain-gauge or

pluviometer, which may be roughly described as a funnel leading to a graduated glass vessel, by which the amount of liquid collected can be easily read off in hundredths of an inch. This rough-and-ready apparatus, although it has been improved upon so as to prevent loss by evaporation, &c., leaves much to be desired. It would take no note, for instance, of very light showers, which would therefore pass unrecorded. The new rainfall recorder, the invention of M. Schmeltz, appears to meet this want, for it will register the falling of a single drop, provided that drop falls upon its sensitive surface. It consists of a box containing a slip of chemically prepared paper, which moves by clockwork from one reel to another, a certain length of the paper passing, as in the Morse and other printing telegraphic machines, within a given time. The paper in question is first treated with a solution of sulphate of iron, and after being thoroughly dried, is brushed with tannic acid. A drop of water on such a surface is sufficient to bring the two chemicals into nearer relationship, and a dark mark is the result. (Our chemical readers will see that the two agents named are the constituents of common writing-ink.) It stands to reason that if the paper be graduated into hours and minutes, the exact time and duration of the rainfall will be recorded. It will be noticed that this rainfall recorder does not afford any means of judging of the amount of water received by the soil, and perhaps for this reason it will serve as an aid to the ordinary rain-gauge, rather than a contrivance destined to supersede that instrument.

Whilst the English farmer has had much cause to anticipate the prospect of another bad season, the Americans have had as much reason to rejoice at the splendid weather with which they have been favoured. But the transatlantic farmer has enemies to guard against such as his English rival knows nothing of. Thus, in the *San Francisco Call* newspaper, we find a curious account of the means which are found necessary to protect the wheat-crops from the invasion of wild-geese, in a certain farm of seventy-five thousand acres in Colusa County, California. Forty men armed with rifles patrol this farm not only in the daytime but on every moonlight night. Flocks of geese—which, we are told, look from a distance like huge white blankets—settle down upon the wheat-fields, and make havoc of the crops, unless the riflemen are on the alert, and knock over a few of them by way of example. Sometimes a thick fog will come on, and then is the time that the geese will feed with impunity, for the men are afraid to use their weapons in case of mutual injury.

The electric light has found a novel employment in the hands of some ingenious Frenchmen, who have lately, by permission of their government, been experimenting with it as a lure for fish. The lamp was contained in an air-tight globe, and was lowered at night into the sea, with the result that thousands of fish of all sizes were attracted to its brilliant light. Boats furnished with nets gradually closed in upon the living mass and made a great haul of fish. We hardly know whether this mode of enticing the finny tribes will be considered quite legitimate by the angling and fishing fraternities.

At the recent distribution of prizes and awards in connection with the late Smoke Abatement Exhibition at South Kensington, it was stated that the Committee have determined that their labours shall not yet cease if they can obtain the support of the public to carry them on. They hope to be able to form a permanent Institute, which would have for its chief objects the promotion of schemes for the better utilisation of coal and coal products, the improvement of means for heating houses as at present constructed without producing smoke, and to deal with those subjects generally for the public information and benefit. Such a scheme should most certainly meet with cordial support from the dwellers in our large cities, where the increase of smoky chimneys is doing such damage to health and property.

In an article ‘Simple Facts concerning Water,’ we recently pointed out how hard water can be made soft by the addition of lime, and the theory of the chemical changes which occur. This method has long been known as Clark’s process, and although thoroughly effectual, it has the disadvantage of requiring the water to be stored in precipitating tanks for about twenty-four hours before it is ready for use. A modification of this system, by which the water can be softened without being left to settle, has been introduced by the Atkins Water-softening and Purifying Company of 62 Fleet Street, London. In this system, a jet of lime-water is introduced into the liquid to be treated, which is then conveyed to a mixing-chamber, and afterwards to some rotary disc filters, where the precipitated lime is quickly collected on cloth-covered discs. The water, thoroughly softened, then flows onward for immediate use, or can be stored in reservoirs until required. This new method of dealing with hard waters has already been tried with success for some private water-supplies, and has now been adopted by the Henley-on-Thames Water-works. The Brighton Railway Company are also erecting the necessary plant for supplying their engines with softened water.

The invention and quickly increasing employment for various purposes of explosives such as nitro-glycerine, dynamite, and others of the same family, compared with which gunpowder is but a feeble agent, call for constant attention on the part of our legislature. It has been recently pointed out by the government inspectors that the railway Companies, in refusing as they do to carry such dangerous goods on any terms whatever, exhibit a short-sighted policy. Such things are easily concealed as ordinary luggage; and the railway Companies must know that in their trains, parcels containing them must often be surreptitiously conveyed. It would be far better to carry them—as acids and other dangerous commodities are now carried—by specially appointed trains, and with proper appliances to protect them from accidental ignition. It is a fortunate circumstance that most of these new explosives need percussion fuses to rouse them into full destructive fury, many of them burning harmlessly away if a simple flame be applied to them. It will thus be seen that dynamite is not such a treacherous fellow-traveller as might be supposed; still, we should be glad to see it relegated to a train of its own.

The recent exhibition at the Alexandra Palace of 'Means and Appliances for the Protection and Preservation of Human Life,' contained many inventions of a very interesting and valuable nature. It included a full-sized pair of facing-points fitted on a railway, showing the extension of the inter-locking system to all the various moving parts of the railway system; contrivances for preventing boiler-explosions; safety-lamps for use in mines, detectors of fire-damp, boat-lowering gear, and many other life-saving appliances. In the section devoted to life-belts and means for keeping the body afloat in the water, we noticed two exhibits which appeared to have the merit of novelty as well as efficiency. The first was the employment of powdered burnt cork for stuffing life-belts, ships' mattresses, cushions, &c.—giving greater buoyancy than the usual unburnt material. The other exhibit to which we refer consisted of life-saving garments. Most dresses of this kind are of a cumbrous and unsightly description, such garments, in fact, as no one would from choice carry about with him. But here we saw greatcoats, ladies' dresses, cut in the latest fashion too, so skilfully furnished in the linings with little cylinders of cork, that their presence was quite undetected until pointed out. People in the habit of yachting, or who are engaged in any occupation which brings them into daily chance of falling into the water, would do well to make further inquiries relative to this useful adaptation of the life-belt principle. The manufacturers are Messrs Wentworth & Co., of 12 Museum Street, London, W.C.

A few weeks ago, Mr Benjamin Askew delivered a lecture to the Royal Scottish Society of Arts, on the use of powdered stucco in the welding of cast steel; and in a day or two afterwards a Committee of the Society had an opportunity of witnessing at St Margaret's Works, Edinburgh, the welding of steel by the process described. The welding is done by means of powdered stucco used just as smiths are accustomed to use sand in other weldings. Four pieces of cast steel from two different makers were welded into one square bar, which was afterwards broken. The fracture showed no mark of the joining, but the grain of the two qualities of steel could be distinguished. Two old files were welded together and hammered into the shape of a chisel, which was then hardened, tempered, and sharpened, and used to cut an inch-bar of iron. The process is so simple that any skilled smith may practise it; he must use heat enough to flux, or melt, the stucco, but not so much as to fuse the steel.

#### OCCASIONAL NOTES.

##### SUGGESTED CURE FOR THE POTATO DISEASE.

ALL the way from Copenhagen comes a cure for the potato-disease. The cure is simple, inexpensive, and its author—Mr J. L. Jensen—says it is effective. The potato-disease, as most of our readers are aware, is caused by a fungoid growth which destroys the structure of the plant. The generally received theory is that the spores germinate—in wet weather—on the leaves of the plants, and that the fungus then spreads through

the plant's system, reaching and spoiling the tubers. Mr Jensen's theory is that it does not reach the tubers in that manner, but by the spores being washed by rain off the leaves into the soil; where, coming in contact with the tubers, disease is induced. Mr Jensen's cure is to earth up the potatoes high enough to afford protection. His method is to remove as much soil from one side of the row as will allow of the stems being bent over at an angle of forty-five degrees, and then to heap up the soil with the hoe—or with a plough of his own invention—to a depth of four inches over the tubers. This is made steep enough to shed the rain which washes the spores, not among the potatoes, but into the ditch thus formed. As Mr Jensen claims to have secured potatoes with no more than from one to three per cent. of diseased tubers, when others not so treated were smitten to the extent of thirty per cent., the plan is well worth a trial.

A writer in the *Gardeners' Chronicle*, hailing from Devonshire, claims to have practised the above method for a number of years with decided success. He learned it from an old labourer, who had always saved his crop by such means, when his neighbours had lost theirs.

#### ROD AND LINE FISHING IN NORTH UIST.

With reference to the article on the above subject which appeared in last month's *Journal*, we are requested by the proprietor to state that all the lochs, &c. on the island are preserved, more especially as regards 'salmon, sea-trout, and salmon-kind,' some of which, such as *Salmo salar* (salmon) and *Salmo eriox* (bull-trout), are, we are assured, occasionally taken.

#### AUTUMN LEAVES.

WHAT memories come, O Heart,  
To thee in the Autumn chill,  
When the leaves that have done their part  
Are tossed at the cold wind's will?  
When the sun that beamed so bright  
Goeth down ere the day is past,  
What shades dost thou see in the fading light?  
What sighs dost thou hear in the blast?

Bright hopes have died like the leaves,  
But, unlike them, no more shall bloom;  
And the voice of the wind is like one who grieves  
Alone, in a world of gloom!  
The shadows I see are those  
Who have passed from my side away,  
And I hear them speak at the short day's close,  
When the light is dull and gray.

And oft in the midnight lone,  
When the world is wrapped in rest,  
The fond hopes I once called my own  
Rise living within my breast.  
But soon, with a throb of pain,  
I think of the leaves that fall,  
And liken their forms to the hopes so vain  
Which no Spring can recall.

J. H.

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